

WHAT IS CLAIMED IS:

1. A synthetic grass assembly for installation on a supporting substrate, the assembly comprising:

a pile fabric with a flexible sheet backing and a plurality of upstanding synthetic ribbons of a selected length, the ribbons extending upwardly from an upper surface of the backing; the backing and pile fabric being suitable for receiving an infill of particulate material intersticed to a fraction of the selected length of the ribbons, wherein the synthetic ribbons are longitudinally intermittently slit in a predetermined pattern of slits and include

an upper portion of the ribbons longitudinally split into individual free-standing strands of a selected width to represent grass blades; and

a lower portion of the ribbons having said slits extended open forming laterally linked strands disposed in a lattice structure adapted to enmesh a surrounding infill particulate material.

2. The synthetic grass assembly according to claim 1, wherein the particulate material of the infill comprises granules of size ranging between 0.5 inches maximum nominal diameter and 50 screen mesh standard.

3. The synthetic grass assembly according to claim 1, wherein the synthetic ribbons are disposed in rows spaced apart a selected minimum distance.

4. The synthetic grass assembly according to claim 3, wherein the maximum distance between rows of synthetic ribbons tufted in the fabric backing is 2.25 inches.

5. The synthetic grass assembly according to claim 3, wherein the maximum distance between rows of synthetic ribbons tufted in the fabric backing is 1.0 inch.

6. The synthetic grass assembly according to claim 3, wherein the maximum distance between rows of synthetic ribbons tufted in the fabric backing is 0.625 inches.

7. The synthetic grass assembly according to claim 1, wherein depth of the infill layer is in the range between 90% to 40% of the length of synthetic ribbons.

8. The synthetic grass assembly according to claim 1, wherein depth of the infill layer is in the range between 85% to 55% of the length of synthetic ribbons.

9. The synthetic grass assembly according to claim 1, wherein depth of the infill layer is in the range between 80% to 70% of the length of synthetic ribbons.

10. The synthetic grass assembly according to claim 1, wherein the synthetic ribbons are fibers selected from the group consisting of polypropylene, polyethylene, nylon, and plastic.

11. The synthetic grass assembly according to claim 1, wherein the upper portion of the synthetic ribbons are fibrillated into individual strands of a width in the range between 1.0 to 15.0 mm.

12. The synthetic grass assembly according to claim 1, wherein the synthetic ribbons are of a thickness in the range between 45 to 200 microns.

13. A synthetic grass assembly for installation on a supporting substrate, the assembly comprising:

a pile fabric with a flexible sheet backing and a plurality of upstanding synthetic ribbons of a selected length, the ribbons extending upwardly from an upper surface of the backing;

an infill layer of particulate material disposed interstitially between the upstanding ribbons upon the upper surface of the backing and of a depth less than the length of the ribbons wherein the particulate material is selected from the group consisting of hard and resilient granules;

an upper portion of the synthetic ribbons extending upwardly from an upper surface of the infill layer, wherein the synthetic ribbons are longitudinally intermittently slit in a predetermined pattern of slits; and

a plurality of said synthetic ribbons having said slits extended into a lower portion of the ribbons and forming laterally linked strands disposed in a lattice structure enmeshing the surrounding particulate infill material.

14. The synthetic grass assembly according to claim 13, wherein the resilient granules are selected from the group consisting of cryogenically ground rubber, rubber, cork, polymer beads, synthetic polymer foam, styrene, perlite, neoprene, and EPDM rubber.

15. The synthetic grass assembly according to claim 13, wherein the hard granules are selected from the group consisting of sand, hard aggregate, silica sand, gravel, slag, granulated plastic, and polymer beads.

16. The synthetic grass assembly according to claim 14, wherein the hard granules are selected from the group consisting of sand, hard aggregate, silica sand, gravel, slag, granulated plastic, and polymer beads.